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PRE-APPEAL BRIEF REQUEST FOR REVIEW

Docket Number (Optional)
1316N-001643

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to "Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)]

On December 13, 2006

Signature

Typed or printed name Michael J. Schmidt

Application Number	Filed
10/738,341	12/17/2003
First Named Inventor: Luc Lemmens	
Art Unit: 3683	Examiner: Christopher Schwartz

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).
Note: No more than five (5) pages may be provided.

I am the

☐ applicant/inventor

☐ assignee of record of the entire interest.
See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)

☒ attorney or agent of record.
Registration number 34,007.

☐ attorney or agent acting under 37 CFR 1.34.
Registration number if acting under 37 CFR 1.34 ____

Signature

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December 13, 2006
Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

☐ *Total of ____ forms are submitted.

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12-14-06

AF/3683

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.:	10/738,341
Filing Date:	12/17/2003
Applicant:	Luc Lemmens
Group Art Unit:	3683
Examiner:	Christopher Schwartz
Title:	AIR PRESSURE PROPORTIONAL DAMPER
Confirmation No.:	9708
Attorney Docket:	1316N-001643

Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

PRE-APPEAL BRIEF REVIEW ARGUMENTS

Sir:

Applicants present the following arguments in support of the Pre-Appeal Brief Review Request.

REJECTION UNDER 35 U.S.C. § 112

Claims 1-17 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicant respectfully traverses this rejection.

The Examiner states that Applicant relies at least in part upon the last passages of Claim 1 for patentability. The last paragraph of Claim 1 reads:

> "a valve assembly disposed between said shock absorber and said spring, said valve assembly always being in direct communication with said fluid in said spring for controlling damping characteristics of said shock absorber at said specified height based upon the pressure of said fluid in said spring."

The limitation of "based upon the pressure of said fluid in said spring" were added in an amendment filed June 8, 2005 and the Examiner considers this to be new matter. Applicant respectfully traverses this finding by the Examiner.

As illustrated in Figure 2, four air springs 22 support the vehicle, one air spring 22 at each corner of the vehicle. The height of the vehicle at each corner is monitored by a height sensor 32. When the vehicle is too high, control system 30 releases pressurized air through pressure line 34 to reduce the pressure in air spring 22 to lower the vehicle and when the vehicle is too low, pressurized air is provided to spring 22 through pressure line 34 by control system 30 to raise the vehicle.

Each shock absorber 20, 26 includes a valve assembly 100 which is attached to pressure line 34 through connecting line 38. Thus, the fluid pressure in spring 22 is the same as the fluid pressure in pressure line 34 which is the same as the fluid pressure in connecting line 38 which is the same as the fluid pressure provided to valve assembly 100. The fluid pressure supplied to valve assembly 100 controls the damping force created by shock absorbers 20, 26 by biasing plunger 154 against seat 116.

Paragraph [0016], the paragraph cited by the Examiner, states "control system 30 activates compressor 36 to supply pressurized air to the air spring 22 adjacent to the specific height sensor 32. The pressurized air extends the individual air spring 22 to raise vehicle body 12 back to its specified height. Connecting line 38 supplies pressurized air to the adjacent shock absorber 20 or 26 to adjust the damping characteristics of the adjacent shock absorber 20 or 26 as will be detailed below. When one or more of height sensors 32 indicates that the position of vehicle body 12 is higher than a specific amount, the control system 30 releases air pressure from the air spring 22 adjacent to the specific height sensor 32. The release of pressurized air lowers vehicle body 12 back to the specified height. Connecting line 38 releases pressurized air from the adjacent shock absorber 20 or 26 to adjust the damping characteristics of the adjacent shock absorber 20 or 26 as will be described below."

Thus, Applicant believes it is clear that while control system 30 controls the fluid pressure within the air springs 22 based on the height of the vehicle, it is the fluid pressure from the air springs 22 that is supplied to the shock absorbers 20, 26 that controls the damping loads. The amount of fluid pressure being supplied to the shock absorbers 20, 26 through connecting line 38 determines the damping characteristics of the shock absorber. Applicant thus believes there is disclosure in the originally filed specification to support control of the damping characteristics of the shock absorber by the pressure of air in the air spring because the pressure of air in the air spring is delivered directly to the shock absorber by connecting line 38.

Variable valve assembly 100 controls the damping characteristics based upon the fluid pressure supplied to it. Paragraph [0027] states that when connecting line 38 is sealingly attached to nipple assembly 116, the pressurized fluid within the adjacent air spring 22 is in communication with the second pressure chamber 170. The amount of pressure within air spring 22 will determine the load urging end portion 158 against plunger seat 116 and this will in turn determine the fluid pressure within upper working chamber 48 required to unseat end portion 158 from plunger seat 116 and allow fluid flow between upper working chamber 48 and reserve chamber 52.

Paragraph [0028] describes the soft damping characteristics when the pressure within air spring 22 is reduced by control system 30 which simultaneously reduces the air pressure in connecting line 38. Paragraph [0029] describes the firm damping characteristics when the pressure within air spring 22 is increased by control system 30 which simultaneously increases the air pressure in connecting line 38. Paragraph [0029] ends with "The degree of damping will be controlled by the force being exerted by air pressure from spring 22 against plunger 154 which is biased against seat 116." (emphasis added).

Applicant believes that this last line clearly supports the limitation "based upon the fluid pressure in the springs". While control system 30 changes the fluid pressure in the springs, it is the fluid pressure in the springs that is supplied to valve 100 by the connecting lines 38 that controls the damping characteristics of the shock absorbers.

Applicant also believes it is actually more accurate to define the air pressure in the spring as controlling the damping load. Assuming that control system 30 fails, and fluid pressure within the air spring will increase when an increased load is added to the vehicle and the fluid pressure in the air spring will decrease when the load is reduced. The damping characteristics of the shock absorbers will also change due to the increase or decrease in air pressure in the air spring even though control system 30 is not functioning.

Looking at it from a different aspect, assume that the air spring 22 fails. Regardless of what control system 30 does, it will not be able to control the damping characteristics of the shock absorber because it will not be able to control the air pressure in the shock absorber. Thus, it is the fluid pressure in the air spring that directly controls the damping characteristics. Control system 30 indirectly controls the damping characteristics by changing the fluid pressure in the air spring.

Thus, Applicant believes Claims 1-16 are fully supported by the specification as originally filed. Claim 17 has been cancelled. Reconsideration of the rejection is respectfully requested.

REJECTION UNDER 35 U.S.C. § 103

Claims 1-3, 9 and 17 are rejected under 35 U.S.C. § 103(a) as being unpatentable over De Molina ('239) in view of Buma, et al. ('554). Claims 4-16 are rejected under 35 U.S.C. § 103(a) as being unpatentable over De Molina in view of Buma as applied to Claim 3 above, and further in view of either Heinz, et al. or Patzenhauer, et al. '885. Applicant respectfully traverses this rejection.

Claim 1 defines the valve assembly as always being in direct communication with the fluid in the spring for controlling damping characteristics of the shock absorber at the specified height based upon the pressure of the fluid in the spring.

As stated by the Examiner, De Molina '239 does not have a distance determining means between the unsprung and sprung portions of the vehicle and thus De Molina does not control the height of the vehicle. De Molina controls the damping of the shock absorber based upon driving conditions sensed by sensor control 54 to provide firm damping by connecting the shock absorber to the air spring when the load is uneven or to provide soft damping by connecting the shock absorber to the air spring through low pressure circuit 32 when the road is even (column 4, lines 55 – column 5, line 22). Buma, et al. discloses a distance determining means which controls the vehicle's attitude but Buma, et al. does not disclose controlling damping characteristics.

Combining Buma, et al. with De Molina will not disclose, teach or suggest a damping system as defined in Claim 1. By adding the disclosure of Buma, et al. to De Molina may provide De Molina with control of the vehicle's attitude but it will not provide a system where the valve assembly is always in direct communication with the fluid in the spring as is defined in Claim 1. Even with attitude control added, De Molina will still be able to select firm or soft and will thus put low pressure circuit 32 between the shock absorber and the spring. Claim 1 defines the valve as always being in direct communication with the spring.

Thus, Applicant believes Claim 1, as amended, patentably distinguishes over the art of record. Likewise, Claims 2-16, which ultimately depend from Claim 1, are also believed to patentably distinguish over the art of record. Claim 17 has been cancelled. Reconsideration of the rejection is respectfully requested.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner

reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action and the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested.

Respectfully submitted,

Dated: December 13, 2006

By: _____
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